DOCUMENT RESUME

ED 305 994 PS 017 897

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TITLE The Influence of Perceived Social Support, Maternal Affect, and the Home on Attachment.
PUB DATE Apr 89
NOTE 19p.; Paper presented at the Biennial Meeting of the Society for Research in Child Development (Kansas City, MO, April 27-30, 1989).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Affective Behavior; *Attachment Behavior; Economically Disadvantaged; *Family Environment; Infants; Intelligence; Mothers; *Parent Influence; *Personality; Research Methodology; *Social Support Groups; Stress Variables; *Test Validity
IDENTIFIERS *Cognitive Stimulation

ABSTRACT

The paper examined the impact of maternal personality and maternal social support variables on the security of mother-infant attachment. The influence of maternal intelligence, affect balance, and life stress were also examined. Measures used included Loevinger's Ego Development Scale, Crnic's Satisfaction with Social Support, the Peabody Picture Vocabulary Test-Revised (PPVT-R), the Home Observation for Measurement of the Environment (HOME), Waters and Deane's (1985) Security of Attachment Q-set Procedure. Participants were 50 socially disadvantaged women and their infants. Findings provided evidence for the validity of the Q-set method for assessing security of attachment. They were consistent with Crockenberg's (1981) data indicating the critical role of maternal social support on attachment. It is of particular interest that the HOME, which was devised primarily to assess quality of stimulation provided by the parent, was the strongest predictor of secure attachment. Suprisingly, this relationship was due primarily to the contribution of a cognitive rather than an affective component of the HOME. Cognitively stimulating mothers may be more sensitive and responsive to their infants' needs. Alternatively, cognitive stimulation may itself promote secure attachment in the infant. (RH)

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THE INFLUENCE OF PERCEIVED SOCIAL SUPPORT, MATERNAL AFFECT, AND THE HOME ON ATTACHMENT

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This research was funded under a grant to the second author from the Foundation for Child Development Program for Young Scholars in Social and Affective Development. We wish to thank Oakland Family Services, who helped recruit and provided coaching intervention with the mothers in this study. We are very grateful to Dr. Ira Firestone for the supervision he provided, while the second author was on sabbatical leave. We thank Dr. Joseph Jacobson for his many helpful suggestions regarding data analysis. We also thank Diane Wille, Barbara Rigney, and Belinda Sims, for their help in data collection and Jim Frankowski in preparation of this manuscript. Presented at the biennial meeting of the Society for Research in Child Development, Kansas City, MO., April 1989. Requests for reprints should be sent to: Karen Kopera, Wayne State University, Department of Psychology, 71 W. Warren, Detroit, MI. 48202.

PS 017 900

ABSTRACT

SEVERAL RECENT STUDIES HAVE EXAMINED THE ROLE OF DISTAL FACTORS, SUCH AS MATERNAL PERSONALITY AND SOCIAL SUPPORT ON DEVELOPMENT OF ATTACHMENT. THE PRESENT STUDY ASSESSED THE INFLUENCE OF TWO PREVIOUSLY UNEXAMINED DISTAL MEASURES: LOEVINGER'S EGO DEVELOPMENT SCALE AND CRNIC'S SATISFACTION WITH SOCIAL SUPPORT. IMPACT OF MATERNAL PPVT-R, AFFECT BALANCE, AND LIFE STRESS WERE ALSO ASSESSED. THE INFLUENCE OF A PROXIMAL MEASURE, THE HOME, ON ATTACHMENT WAS ALSO EXAMINED FOR THE FIRST TIME.

PERCEIVED SOCIAL SUPPORT AND LIFE STRESS WERE ASSESSED PRENATALLY; EGO LEVEL SHORTLY THEREAFTER. THE HOME, PPVT-R, AND AFFECT BALANCE WERE GIVEN AT 13 MOS. BECAUSE THE SAMPLE WAS COMPRISED OF SOCIALLY DISADVANTAGED WIC MOTHERS, WHO WERE RELUCTANT TO PARTICIPATE IN LABORATORY ASSESSMENT, WATERS AND DEANE'S Q-SET WAS USED TO ASSESS ATTACHMENT IN 50 MOTHER-INFANT PAIRS IN THE HOME AT 14 MOS.

THE HOME WAS THE BEST PREDICTOR OF SECURE ATTACHMENT. SURPRISINGLY, THIS RELATIONSHIP WAS DUE PRIMARILY TO THE CONTRIBUTION OF A COGNITIVE RATHER THAN AN AFFECTIVE COMPONENT OF THE HOME. PERCEIVED SOCIAL SUPPORT AND MATERNAL AFFECT ALSO PREDICTED ATTACHMENT (R^2 FOR THE 3 PREDICTORS JOINTLY = .27); EGO LEVEL, PPVT-R, AND LIFE STRESS DID NOT. A PATH MODEL SHOWED THAT THE INFLUENCE OF MATERNAL AFFECT ON ATTACHMENT WAS MEDIATED ENTIRELY BY ITS IMPACT ON THE HOME; WHEREAS SOCIAL SUPPORT INFLUENCED ATTACHMENT INDEPENDENTLY OF ITS INFLUENCE ON QUALITY OF MATERNAL STIMULATION.

THESE DATA PROVIDE EVIDENCE FOR THE VALIDITY OF THE Q-SET METHOD, CONFIRM THE IMPORTANCE OF SOCIAL SUPPORT, AND SUGGEST THAT COGNITIVE STIMULATION ITSELF MAY PROMOTE SECURE ATTACHMENT.

AIMS OF STUDY

AINSWORTH AND OTHERS (AINSWORTH ET AL., 1978; SROUFE, 1985) HAVE EMPHASIZED THE ROLE OF MATERNAL SENSITIVITY IN THE DEVELOPMENT OF SECURE ATTACHMENT. MORE RECENTLY, SEVERAL STUDIES HAVE EXAMINED THE IMPACT OF MORE DISTAL INFLUENCES, NAMELY, MATERNAL PERSONALITY AND MATERNAL SOCIAL SUPPORT (BELSKY ET AL., 1988; CROCKENBERG, 1981). THE PRESENT STUDY ASSESSED THE ROLE OF BOTH TYPES OF MATERNAL FACTORS, USING TWO PREVIOUSLY UNUSED BUT PROMISING MATERNAL MEASURES: **LOEVINGER'S EGO DEVELOPMENT SCALE** (LOEVINGER & WESSLER, 1970) AND **CRNIC'S PRECEIVED SOCIAL SUPPORT INTERVIEW** (CRNIC ET AL., 1983).

THE IMPACT OF MATERNAL INTELLIGENCE, INDEXED ON THE PEABODY PICTURE VOCABULARY TEST (PPVT-R), AFFECT BALANCE, AND LIFE STRESS ON ATTACHMENT WERE ALSO ASSESSED. IN ADDITION, THE ROLE OF A PREVIOUSLY UNINVESTIGATED PROXIMAL MEASURE, THE **HOME OBSERVATION FOR MEASUREMENT OF THE ENVIRONMENT (HOME)**, WAS EXAMINED IN RELATION TO ATTACHMENT AND TO THE MATERNAL DISTAL PREDICTORS. WATERS AND DEANE'S (1985) **Q-SET PROCEDURE** WAS USED TO ASSESS THE **SECURITY OF ATTACHMENT** IN THE HOME AT 14 MONTHS.

SUBJECTS

50 MOTHERS -- PRIMIGRAVIDAS, WIC RECIPIENTS, RECRUITED PRENATALLY

50 TODDLERS -- 22 MALES AND 28 FEMALES

THE MOTHERS AND INFANTS IN THE PRESENT STUDY TOOK PART IN AN INTERVENTION STUDY ASSESSING EFFECTS OF PERINATAL COACHING ON INFANT ATTACHMENT AND PLAY. OAKLAND FAMILY SERVICES, A PRIVATE SOCIAL SERVICE AGENCY, HAS DEVELOPED A PERINATAL COACHING PROGRAM WHOSE GOAL IS TO PROVIDE EMOTIONAL SUPPORT AND INFORMATION ON PREGNANCY AND EARLY CHILD CARE TO FIRST-TIME PARENTS. EXPECTANT MOTHERS WERE RANDOMLY ASSIGNED TO EITHER A COACHED OR NON-COACHED GROUP.

SINCE THE TWO GROUPS WERE NOT DIFFERENT ON ANY OF THE BACKGROUND VARIABLES, THE DATA WERE POOLED FOR THE PURPOSES OF THE PRESENT STUDY.

TABLE 1
MATERNAL AND INFANT ASSESSMENTS

MEASURE	TIME OF ASSESSMENT	INSTRUMENT
MATERNAL:		
EGO LEVEL	PRENATAL[A]	LOEVINGER SENTENCE COMPLETION TEST (LOEVINGER & WESSLER, 1970)
LIFE STRESS	PRENATAL	LIFE EVENTS SCALE (HOLMES & RAHE, 1967)
SATISFACTION WITH SOCIAL SUPPORT	PRENATAL	SOCIAL SUPPORT INTERVIEW (CRNIC ET AL., 1983)
PPVT-R SCORE	13 MONTHS	PEABODY PICTURE VOCABULARY TEST-REVISED (DUNN & DUNN, 1981)
HOME SUBSCALES AND TOTAL SCORE	13 MONTHS	HOME OBSERVATION FOR THE MEASUREMENT OF THE ENVIRONMENT (CALDWELL & BRADLEY, 1979)
AFFECT BALANCE	13 MONTHS	AFFECT BALANCE SCALE (BRADBURN, 1969)
INFANT:		
RESPONSE TO COMFORTING AND DIFFERENTIAL RESPONSIVENESS TO ATTACHMENT FIGURE[B]	14 MONTHS	SECURITY OF ATTACHMENT Q-SET (WATERS & DEANE, 1985)

[A] Forty-three women (86%) completed Loevinger's Sentence Completion Test while pregnant or soon after delivery; five (10%) during the first year; two refused.
[B] The examiner was blind with respect to the other maternal measures collected at 13 mos.

SECURITY OF ATTACHMENT MEASURE

TO DATE MOST ATTACHMENT STUDIES HAVE BEEN CONDUCTED IN THE LABORATORY, USING AINSWORTH'S STRANGE SITUATION PARADIGM. THE PRESENT SAMPLE WAS COMPRISED OF SOCIALLY DISADVANTAGED WOMEN, MANY OF WHOM WERE WARY OF PARTICIPATION IN A STUDY ESPECIALLY IF TRANSPORT TO A LABORATORY WAS INVOLVED. CONSEQUENTLY, WATERS AND DEANE'S (1985) Q-SET PROCEDURE FOR ASSESSING SECURITY OF ATTACHMENT WAS USED. BEHAVIOR WAS OBSERVED FOR 3-4 HOURS IN THE HOME, AND SUBSEQUENTLY THE EXAMINER SORTED THE 100-CARD Q-SET.

THE SECURITY OF ATTACHMENT SCORE CONSISTS OF THE SUM OF THE EXAMINER RATINGS FOR THE NINE ITEMS IDENTIFIED BY WATERS.

RESPONSIVENESS TO COMFORTING AND DIFFERENTIAL RESPONSIVENESS TO ATTACHMENT FIGURE:

1. EASILY COMFORTED BY ADULT
2. ACTIVELY SOLICITS COMFORTING FROM ADULT WHEN DISTRESSED
3. DOES NOT LOOK TO ADULT FOR REASSURANCE WHEN WARY
4. PREFERS TO BE COMFORTED BY ADULT
5. ACTIVELY SOLICITS ASSISTANCE OR COMFORT AFTER MINOR INJURY
6. DOES NOT ACCEPT ADULT'S ASSURANCES WHEN WARY IN FAMILIAR CONTEXTS
7. IS NOT BOLDER OR MORE CONFIDENT TO PLAY WHEN ADULT IS NEARBY
8. DOES NOT ACCEPT ADULT'S ASSURANCES WHEN WARY IN UNFAMILIAR PLACES
9. DOES NOT PREFER PHYSICAL CONTACT WITH ADULT

TABLE 2
CHARACTERISTICS OF THE SAMPLE BY CONDITION

	EXPERIMENTALS (N = 27)	CONTROLS (N = 23)	t OR χ^2	TOTAL SAMPLE (N = 50)
MATERNAL				
AGE[A]	21.4 (2.9)	22.3 (3.6)	-1.03	21.8 (3.3)
SOCIOECONOMIC STATUS (SES)	21.6 (6.6)	23.6 (7.3)	-1.00	22.5 (6.9)
EDUCATION (YEARS)	12.0 (1.4)	12.2 (1.3)	-0.65	12.1 (1.4)
MARITAL STATUS (% MARRIED)	40.7	43.5	0.04	42.0
MATERNAL RACE (% WHITE)[B]	92.6	95.7	0.20	94.0
NUMBER OF INDIVIDUALS IN SOCIAL NETWORK: PRENATAL[C]	5.3 (2.5)	5.6 (2.3)	-0.45	5.4 (2.4)
NUMBER OF INDIVIDUALS IN SOCIAL NETWORK: 13 MOS[C]	4.4 (1.8)	5.4 (3.3)	1.35	4.9 (2.6)
PREGNANCY UNPLANNED (%)	85.2	82.6	0.00	84.0
INFANT				
BIRTH WEIGHT (gm)	3502 (498)	3257 (489)	1.75	3389(504)
LENGTH(cm)	50.7 (2.7)	49.5 (3.1)	1.41	50.2 (2.9)
SEX OF INFANT (% MALE)	44.4	43.5	0.00	44.0
DAYS IN NICU	1.0 (4.1)	0.3 (1.5)	0.74	0.7 (3.2)

NOTE. Values are means, except where percentages are indicated. Standard deviations are given in parentheses.

[A]Minimum age at time of recruitment was 17 years.

[B]Includes Hispanic origin.

[C]Social Network Diagram (Levitt et al., 1986). The sample as a whole seems isolated when compared to Levitt et al.'s urban, intact middle class mothers who reported an average of 13 persons in their Network Diagrams.

TABLE 3

MATERNAL PREDICTOR VARIABLES BY CONDITION

MEASURES	EXPERIMENTALS (N = 27)	CONTROLS (N = 23)	t	TOTAL SAMPLE (N = 50)
PPVT-R SCORE[A]	88.56 (12.39)	85.89 (9.85)	0.77	87.41 (11.32)
EGO LEVEL[B]	4.41 (1.12)	4.57 (1.08)	-0.51	4.48 (1.09)
HOME SCALES[C]				
I. RESPONSIVITY OF MOTHER	10.19 (0.74)	10.13 (1.01)	0.22	10.16 (0.87)
II. AVOIDANCE OF RESTRICTION AND PUNISHMENT	5.41 (1.62)	5.70 (1.40)	-0.67	5.54 (1.52)
III. ORGANIZATION OF THE ENVIRONMENT	4.70 (1.10)	4.87 (0.82)	-0.60	4.78 (0.98)
IV. APPROPRIATE PLAY MATERIALS	7.56 (1.09)	7.87 (1.14)	-1.00	7.70 (1.11)
V. MATERNAL INVOLVEMENT	4.70 (1.30)	4.35 (1.03)	1.06	4.54 (1.18)
VI. VARIETY IN DAILY STIMULATION	3.00 (1.11)	3.22 (1.28)	-0.64	3.10 (1.18)
TOTAL HOME SCORE	35.56 (3.86)	36.13 (3.31)	-0.56	35.82 (3.59)

TABLE 3 (continued)

MEASURES	EXPERIMENTALS (N = 27)	CONTROLS (N = 23)	t	TOTAL SAMPLE (N = 50)
NUMBER OF STRESSFUL EVENTS	11.70 (3.85)	9.96 (3.01)	1.76	10.90 (3.56)
SATISFACTION WITH SOCIAL SUPPORT	21.72 (3.92)	21.36 (2.91)	0.36	21.42 (3.62)
INTIMATE	11.88 (3.07)	11.60 (2.52)	0.32	11.75 (2.81)
FRIENDS	3.55 (0.54)	3.75 (0.35)	-1.54	3.65 (0.47)
COMMUNITY	6.15 (1.28)	6.17 (1.07)	-0.06	6.16 (1.18)
AFFECT BALANCE	4.81 (1.90)	5.04 (2.06)	-0.41	4.92 (1.96)
POSITIVE AFFECT	2.81 (1.57)	2.96 (1.80)	-0.30	2.88 (1.66)
NEGATIVE AFFECT	2.19 (1.55)	2.26 (1.82)	-0.16	2.22 (1.66)

NOTE. Values are means. Standard deviations are given in parentheses. Since no differences were found between experimentals and controls (See Tables 2 and 3), the two groups were combined for the remaining analyses.

[A] Two subjects for whom English is not the primary language not included; two others refused.

[B] Two controls refused to complete the test. The mean scores are at the Conformist stage of I-3.

[C] These scores are comparable to scores obtained by a similar low education group in Seattle (Barnard, Bee, & Hammond, 1984).

TABLE 4

FACTOR LOADINGS OF HOME SUBSCALES

HOME SUBSCALES	VARIMAX ROTATED FACTOR LOADINGS	
	FACTOR 1	FACTOR 2
EMOTIONAL AND VERBAL RESPONSIVITY OF MOTHER	.699	-.135
AVOIDANCE OF RESTRICTION AND PUNISHMENT	.667	.223
ORGANIZATION OF THE ENVIRONMENT	.643	.017
PROVISION OF APPROPRIATE PLAY MATERIAL	.090	.781
MATERNAL INVOLVEMENT WITH CHILD	-.170	.765
OPPORTUNITIES FOR VARIETY IN STIMULATION	.126	.623

NOTE. A factor analysis of the HOME yielded two distinct factors: Factor 1 was considered an affective factor given the high loadings of the first three subscales listed above; Factor 2, a cognitive factor with high loadings on the other three subscales.

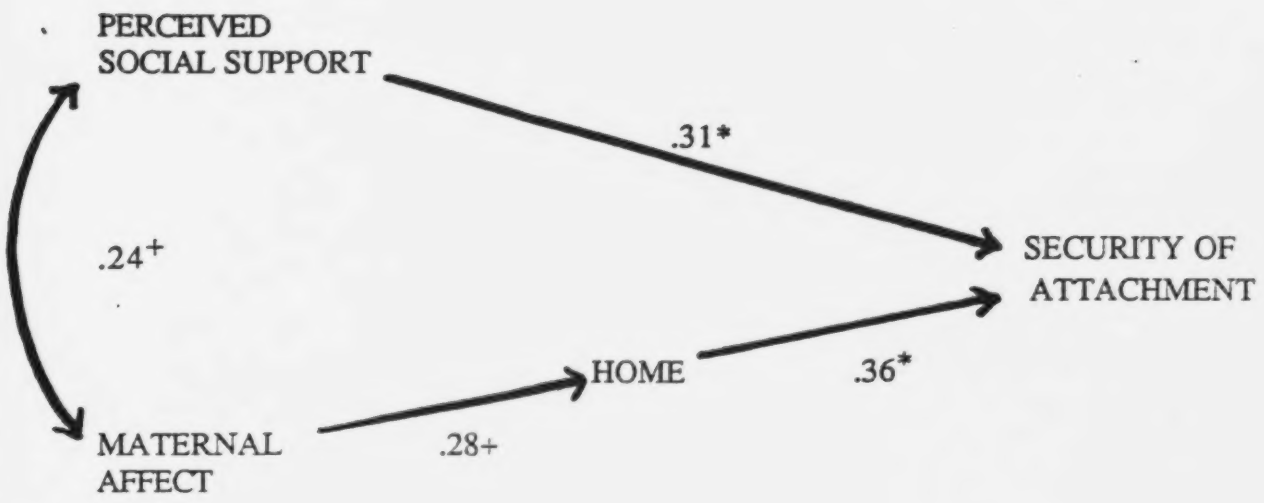
TABLE 5

MATERNAL PREDICTORS OF ATTACHMENT AT 14 MONTHS

	RESPONSIVENESS TO ATTACHMENT FIGURE
PPVT-R	.09
EGO LEVEL	.12
HOME	.39**
AFFECTIVE CLUSTER	.20
COGNITIVE CLUSTER	.36**
PERCEIVED SOCIAL SUPPORT	.32*
INTIMATE	.29*
FRIENDS	.12
COMMUNITY	.18
STRESSFUL LIFE EVENTS	.11
AFFECT BALANCE	.29*
POSITIVE AFFECT	.16
NEGATIVE AFFECT	-.24+

+p < .10 *p < .05 **p < .01.

EFFECTS OF PERCEIVED SOCIAL SUPPORT, MATERNAL AFFECT, AND THE HOME ON SECURITY OF ATTACHMENT



$^{+}p < .10$. $^{*}p < .05$.

1. These three predictors jointly explained 27.2% of the variance in attachment.

2. The HOME and perceived social support were unrelated ($r = .02$).

3. The HOME and perceived social support each contributed independently to attachment.

4. The effect of maternal affect on attachment was mediated entirely by the HOME.

5. By contrast, social support affected attachment independently of the HOME.

CONCLUSIONS

1. THESE DATA PROVIDE EVIDENCE FOR THE VALIDITY OF THE Q-SET METHOD FOR ASSESSING SECURITY OF ATTACHMENT.
2. THEY ARE CONSISTENT WITH CROCKENBERG'S (1981) DATA INDICATING THE CRITICAL ROLE OF MATERNAL SOCIAL SUPPORT ON ATTACHMENT.
3. IT IS OF PARTICULAR INTEREST THAT THE HOME, WHICH WAS DEVISED PRIMARILY TO ASSESS QUALITY OF STIMULATION PROVIDED BY THE PARENT, WAS THE STRONGEST PREDICTOR OF SECURE ATTACHMENT
4. SUPRISINGLY, THIS RELATIONSHIP WAS DUE PRIMARILY TO THE CONTRIBUTION OF A COGNITIVE RATHER THAN AN AFFECTIVE COMPONENT OF THE HOME. COGNITIVELY STIMULATING MOTHERS MAY BE MORE SENSITIVE AND RESPONSIVE TO THEIR INFANT'S NEEDS. ALTERNATIVELY, COGNITIVE STIMULATION MAY ITSELF PROMOTE SECURE ATTACHMENT IN THE INFANT.

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